



Line 5 Riyadh Metro Tunnel and Deep Underground Stations

Jose Luis Sanchez, Jose Maria Lorenzo, Alberto Gomez-Elvira

TYPSA, Madrid, Spain

Contact: jlсанchez@typsa.com; jmlorenzo@typsa.com; agomezelvira@typsa.com

Abstract

As part of the future Riyadh Public transport network in Arabia, ADA (Arriyadh Development Authority) has planned the development of an extensive Metro system, serving the city of Riyadh with 6 Metro lines. The package RM3 of Riyadh Metro project comprises lines 4, 5 and 6. FAST consortium has been awarded for the design and construction of the package RM3. TYPSA is part of FAST consortium since the Tender stage and it is in charge of the detailed design of Line 5.

In this article the authors explain the key project topics and current construction stage of the line 5, designed entirely by TYPSA.

Line 5 is a totally underground line, with a first section in Cut&Cover Tunnel and the main part of the line in TBM tunnel, with a single tube section of 8,70m inner diameter. 12 Deep Underground Stations are spread along the line, that runs under one of the busiest Riyadh streets, King Abdulaziz Road.

Keywords: Metro, Riyadh, TBM tunnel, Deep Underground Station, TYPSA

1 Introduction

ADA has planned an extensive Metro network in Riyadh. 6 lines are currently under project development and construction.

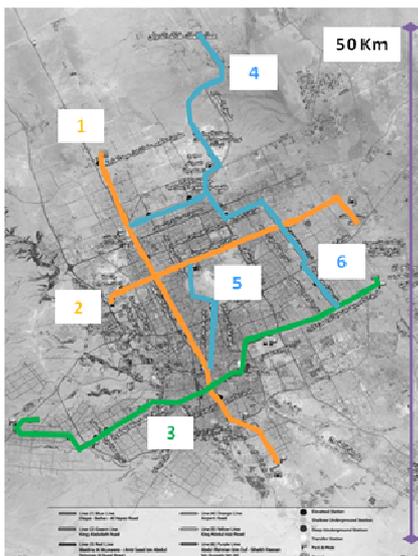


Fig. 1: General overview of Riyadh Metro project

Main figures of Riyadh Metro Project:

- 6 Lines
- 176 km of Metro lines
- 42 km of underground line
- 85 Stations
- 7 Depots
- 26.000 M\$ total investment
- 5 years for project and construction

TYPSA is developing the detailed design of Metro Line 5, with a total length of 13017,3m. In this Line, three different tunnel sections and 12 Deep Underground Stations are designed: